

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 July 2005 (28.07.2005)

PCT

(10) International Publication Number
WO 2005/068403 A2

- (51) International Patent Classification⁷: **C07B 35/00**
- (21) International Application Number:
PCT/US2004/040243
- (22) International Filing Date: 2 December 2004 (02.12.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/534,592 6 January 2004 (06.01.2004) US
- (71) Applicant (for all designated States except US):
MALLINCKRODT INC. [US/US]; 675 McDonnell Boulevard, P.O. Box 5840, St. Louis, MO 63134 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **WANG, Peter, Xianqi** [US/US]; 1708 Eldon Ridge Court, Chesterfield, MO 63017 (US). **MOSER, Frank, W.** [US/US]; 3896 Petrified Forest Drive, Arnold, MO 63010 (US).
- (74) Agents: **REBMAN, Christine, M.** et al.; Mallinckrodt Inc., 675 McDonnell Boulevard, P.O. Box 5840, St. Louis, MO 63134 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/068403 A2

(54) Title: METHOD FOR SELECTIVE REDUCTION OF AROMATIC COMPOUNDS

(57) Abstract: A method for the selective reduction of an aromatic compound. The present invention provides a method for preventing the reduction of at least one halogen substituted aromatic ring of an aromatic compound, while allowing the reduction of at least one functional group on the aromatic compound. In the present invention at least one hydroxyl group is placed on the at least one halogen substituted aromatic ring to be protected from reduction. The aromatic compound is then reacted with at least one alkali metal in at least one nitrogen containing base and at least one alcohol at a ratio of the alcohol to the nitrogen containing base at which the aromatic ring with the hydroxyl group is protected from reduction, while the desired functional group is reduced.